

## CLAIMS

1. A method for implementing multicasting in IP networks, in which multicast packets are transmitted by means of a multicast tree from one transmitter through several multicast controllers to several recipients, the method  
5 comprising:

generating at least one multicast tree intended for control messages in the network from a network multicast controller to multicast controllers at cell level,

10 transmitting control messages from the network multicast controller along the multicast tree to the multicast controllers at cell level, the control messages containing information on the multicast transmission of the network and a command to connect to the multicast tree of the network intended for multicasts.

2. A method as claimed in claim 1, further comprising:  
15 when connecting to the IP network, the cell-level multicast controller connects to the multicast tree intended for the network control messages.

3. A method as claimed in claim 1, wherein after receiving a control message from the network multicast controller through the multicast tree intended for control messages, the cell-level multicast controller connects to the  
20 network multicast tree intended for multicasts and defined in the control message.

4. A method as claimed in claim 1, wherein after connecting to the network multicast tree intended for multicasts, the cell-level multicast controller transmits the packets it received through the tree to the receivers in the cell.

25 5. A method as claimed in claim 1, wherein information on the identifier of one or more multicast groups is included in the control messages.

6. A method as claimed in claim 1, wherein information on the time of validity of the control message is included in the control messages.

30 7. A method as claimed in claim 1, wherein information on sender authentication is included in the control messages.

8. A method as claimed in claim 1, wherein a receiver filter is included in the control messages.

35 9. A method as claimed in claim 1, wherein after receiving a control message from the network multicast controller, the cell-level multicast controller registers as a recipient of the multicast defined in the control message.

10. A method as claimed in claim 1, wherein after receiving a control message from the network multicast controller, the cell-level multicast controller notifies the recipients of its cell that a multicast is available.

5 11. A method as claimed in claim 1, wherein after receiving a control message from the network multicast controller through the multicast tree intended for control messages, the cell-level multicast controller notifies the recipients of its cell that a multicast must be received.

10 12. A method as claimed in claim 1, wherein after receiving a control message from the network multicast controller through the multicast tree intended for control messages, the cell-level multicast controller does not process the message.

13. An arrangement for implementing multicasting in IP networks that comprises

15 a number of routers transmitting messages of the different components in the network to each other,

at least one multicast transmitter that is arranged to transmit multicast packets through a multicast tree to several receivers,

a number of cell-level multicast controllers that are arranged to transmit packets to receivers,

20 a network multicast controller that is arranged to control the cell-level multicast controllers,

wherein the network comprises at least one multicast tree intended for control messages from the network multicast controller to the cell-level multicast controllers,

25 the network multicast controller is arranged to transmit control messages along the multicast tree to the cell-level multicast controllers,

and the control messages contain information on the multicast transmission of the network and a command to connect to the multicast tree of the network intended for multicast transmissions.

30 14. An arrangement as claimed in claim 13, wherein the cell-level multicast controller is arranged to connect to the multicast tree intended for network control messages when connecting to the IP network.

35 15. An arrangement as claimed in claim 13, wherein the cell-level multicast controller is arranged to connect to the multicast tree of the network intended for multicasts after having received a control message from the net-

work multicast controller through the multicast tree intended for control messages.